

Name _____

From Gene to Protein

1. Given the following DNA sequence, **transcribe** the complementary strand of mRNA.

3' G-T-A-C-C-A-G-T-G-C-A-T 5'
5' _____ 3'

2. **Translate** the following mRNA strand into the amino acids needed to form this particular protein.

5' A-U-G-U-G-C-C-A-A-A-G-A-C-G-U-U-G-A 3'

_____, _____, _____, _____, _____, _____

3. Given the following DNA sequence, write the complementary mRNA codons AND tRNA anticodons.

3' ATGGAATTCGGCTAG 5'

mRNA codons 5' _____, _____, _____, _____, _____ 3'
tRNA anticodons _____, _____, _____, _____, _____

4. Given the following DNA sequence, determine the amino acids that will create the final protein product. *Hint: Write out mRNA codons first!*

DNA: 3' TACATGGTGCATATT 5'

mRNA codons 5' _____, _____, _____, _____, _____ 3'
amino acids _____, _____, _____, _____, _____

5. Given the following DNA sequence, determine the amino acids that will create the final protein product. *Hint: Write out mRNA codons first!*

DNA: 5' TCATCCATTAGCCAT 3'

mRNA codons 5' _____, _____, _____, _____, _____ 3'
amino acids _____, _____, _____, _____, _____